REMARKS

Applicants' agent wishes to thank the Examiner for the examination of the above-identified Application.

This response fully addresses the issues raised in the aforementioned Office Action. A detailed discussion of each issue is provided in the sections that follow.

Briefly, this response includes the following items:

1. A paragraph on page 2 in the specification has been amended to correct the number of a U.S. Patent cited there.
2. A paragraph on page 14 in the specification has been amended to correct a typographical error.
3. A paragraph on page 18 in the specification has been amended to add an inadvertently omitted reference numeral. A typographical error in the same paragraph has also been corrected.
4. Claims 1 through 12 have been cancelled.
5. Claim 24 has been amended to incorporate limitations previously recited in Claim 13 relative to more than one transferring device and driving mechanism. This claim has also been amended to correct a typographical error by deleting extraneous text.
6. Drawing objections have been addressed.
7. The rejections of claims under 35 U.S.C. § 102 have been argued.
8. The rejections of claims under 35 U.S.C. § 103 have been traversed and argued.

No new matter has been added by the aforementioned amendments or arguments.

Information Disclosure Statement

Applicants' agent wishes to thank the Examiner for pointing out the inadvertent error by which U.S. Patent 5,693,195, instead of U.S. Patent 5,693,165, was cited in the IDS of 15 November 2000. The Examiner was correct in discerning that it was intended to list the U.S. Patent 5,693,165 to Schmitz that was cited on page 2 of the specification. The specification has been amended in this response to correct the patent number.

Drawing Objections

The Examiner indicated that some features of the invention specified in the claims were not shown in the drawings, namely the cutting device comprising a pinch knife cutter and knife anvil of Claims 22 and 23 and the applicator for performing a secondary process of Claims 11 and 20.

Cutting Device

The cutting device 40, the pinch knife cutter 41, and the knife anvil 42 are shown in Figure 5, as noted on page 10 at lines 6 and 7. Therefore, applicants' agent respectfully requests that the Examiner reconsider and withdraw this objection.

Applicator

The applicator 300 is shown in Figures 9A and 9B. The reference numeral was inadvertently omitted in the text of page 18 of the application, as filed, where these figures are described, beginning at line 21. This paragraph has been amended so that line 22 now reads: "...including an applicator 300 for performing...". No new matter was added because the reference numeral was shown on the drawings as filed. Therefore, applicants' agent respectfully requests that the Examiner reconsider and withdraw this objection.

Claim Rejections Under 35 U.S.C. § 102

First Rejection Under 35 USC 102

The Examiner rejected Claims 1 through 11 and 24 under 35 USC 102(e) as being anticipated by U.S. Patent 6,149,755 issued to McNichols *et al.* on 21 November 2000. The Examiner equated various structural elements of the apparatus of the McNichols *et al.* reference to elements of the present invention.

Claims 1 through 11 have been cancelled. Claim 24 has been amended to include the limitations previously recited in Claim 13 regarding at least two rotatable transferring devices and at least two independent driving mechanisms including motors. As noted by the Examiner in the rejections under 35 USC 103, below, the McNichols *et al.* reference does not disclose a second rotatable transferring device or a second independent driving means. Therefore, the McNichols *et al.* reference does not teach each and every element of the amended Claim 24 and, thus, does not anticipate the claimed invention.

Second Rejection Under 35 USC 102

The Examiner rejected Claims 1 through 10 and 24 under 35 USC 102(b) as being anticipated by U.S. Patent 5,895,555 issued to Van Den Bergh on 20 April 1999. The Examiner equated various structural elements of the apparatus of the Van Den Bergh reference to elements of the present invention. The Examiner also stated, apparently with regard to Claims 3 and 4, that "the passive language of the claims requires only that the relative speeds of the parts in the application and receiving zones by variable and not that relative speeds actually be varied".

Claims 1 through 10 have been cancelled. Claim 24 has been amended to include the limitations previously recited in Claim 13 regarding at least two rotatable transferring devices and at least two independent driving mechanisms including motors. As noted by the Examiner in the rejections under 35 USC 103, below, the Van Den Bergh reference does not disclose a second rotatable transferring device or, applicants' agent notes, a second independent driving means. Therefore, the Van Den Bergh reference does not teach each and every element of the amended Claim 24 and, thus, does not anticipate the claimed invention.

With respect to the use of the term "variable" in the claims, applicants' agent respectfully offers the following definitions from the Merrriam-Webster's Collegiate Dictionary:

> Main Entry: **[1]var·i·able**
>
> Function: *adjective*
>
> Etymology: Middle English, from Middle French, from Latin *variabilis,* from *variare* to vary
>
> **1 a :** able or apt to vary : subject to variation or changes <*variable* winds> <*variable* costs> **b : FICKLE, INCONSTANT**
>
> **2 :** characterized by variations

Applicants' agent respectfully avers that it is clear from the specification that this term is used in the adjectival sense of inconstant or characterized by variations. This sense is apparent in the text, including in the paragraphs beginning on page 11 at line 15 and on page 11 at line 26, as well as from the speed profiles shown in Figures 6 and 7 as described in the referenced paragraphs. Applicants' agent further avers that this usage of the term is well known in the art, as evidenced by its repeated usage in precisely the same sense in the disclosures of every one of the McNichols *et al.*, Van Den Bergh, Rajala *et al.*, and Ujimoto *et al.* references cited by the Examiner in this Office action, and in several of the claims of these references.

Accordingly, applicants' agent respectfully requests that the rejections under 35 USC 102 be reconsidered and withdrawn.

Claim Rejections Under 35 U.S.C. § 103

First Rejection Under 35 USC 103

The Examiner rejected Claims 1 through 24, *i.e.*, all the pending claims, under 35 USC 103(a) as being unpatentable over the same McNichols *et al.* reference cited in the above rejections under 35 USC 102. The Examiner stated that the McNichols *et al.* reference discloses the claimed invention except for the second rotatable transferring device and the second independent driving means of Claim 13. The Examiner then stated that the rotatable transferring device 100 of the McNichols *et al.* reference "transfers pairs of articles between the receiving zone and the application zone and therefore functions equivalently with the device of the present invention", adding that "[i]t is recognized that the invention of Claim 13 required a second independent driving mechanism, however, in the absence of any language differentiating the functioning of the first and second independent driving means, the single driving means of McNichols *et al.* would function equivalently." The Examiner also stated that the application of an adhesive in Claims 12 and 21 "is deemed to have been an obvious design choice".

Applicants' agent respectfully traverses the rejection on the ground that the Examiner has not met the requirements of MPEP § 2143 for the establishment of a *prima facie* case of obviousness with regard to the pending claims.

Basic Requirements of a *Prima Facie* Case of Obviousness

According to MPEP 2143, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Lack of Teaching or Suggestion of All the Claim Limitations

Applicants' agent respectfully points out the following fundamental differences in the structures and functions of the present invention and the McNichols *et al.* reference, which differences yield important advantages in the present invention.

In the embodiments of the present invention in which more than one rotatable transferring device is present, each transferring device is independently driven. For instance, in the embodiment of Figure 4, as described in the specification, including on page 9, beginning at line 4, the driving mechanism 61A drives transferring device 50A, while driving mechanism 61B drives transferring device 50B. In other words, the embodiment of Figure 4 is similar to a combination of two of the singular mechanisms shown in Figure 1, with the first mechanism, comprising driving mechanism 61A and transferring device 50A, shown in Figure 4 in the same orientation as the singular mechanism is shown in Figure 1, and with the second mechanism, comprising driving mechanism 61B and transferring device 50B, being arranged in a mirror image of the first mechanism. The transferring device 50A receives one part 30 from web 31, then transferring device 50B receives the next sequential part 30 from web

31, then transferring device 50A receives the next sequential part 30 from web 31, and so on, in an alternating A-B-A-B sequence.

Another embodiment having more than one rotatable transferring device is shown in Figures 9A and 9B. In this embodiment, as described in the paragraph beginning on page 18 of the specification at line 16, there are two transferring devices 150 and 250, each having three shell segments. As stated in this paragraph, the arrangement pattern of multiple devices is limited, in that they "cannot be arranged such that any two shell segments on one transferring device are adjacent to one another in sequence without at least one shell segment from a separate transferring device driven by a separate motor interposed between them." In other words, the multiple transferring devices must alternate in receiving and applying parts. In the embodiment of Figures 9A and 9B, shell segment 151A of transferring device 150 receives one part 30 from web 31, then shell segment 251A of transferring device 250 receives the next sequential part 30 from web 31, then shell segment 151B of transferring device 150 receives the next sequential part 30 from web 31, then shell segment 251B of transferring device 250 receives the next sequential part 30 from web 31, and so on. Thus, even with multiple shell segments per transferring device, the two transferring devices in this embodiment receive and apply the parts in an alternating A-B-A-B sequence. Of course, in an embodiment having three transferring devices, the alternating sequence would be A-B-C-A-B-C, rather than A-B-A-B.

It is important to note that the alternating independently driven transferring devices of Figures 4, 9A, and 9B receive and apply the sequential parts from the infeed web in a common receiving zone and a common application zone, as shown in Figure 4 and as can be understood from Figures 9A and 9B. Such an embodiment having more than one rotatable transferring device is claimed in Claim 13, where it is recited that the claimed apparatus receives parts traveling through a receiving zone and applies the parts to a carrier traveling through an application zone, and that the at least two independently driven transferring devices receive the parts in the receiving zone and apply the parts in the application zone (underlining added for emphasis of the singular case of all prepositions).

It may also be noted that Figure 4 of the subject application shows two parallel infeed webs and so the apparatus is shown in this figure as receiving and applying pairs of side-by-side parts 30. In the present invention, the sequential pairs of side-by-side parts are received and applied by alternating independently driven transferring devices. Thus, in the embodiment of Figure 4, the sequential pairs of side-by-side parts are received and applied by transferring devices 50A and 50B in the same A-B-A-B sequence described above. For example, if a first pair is received and applied by transferring device 50A, the next pair is received and applied by 50B, the next pair by 50A, and so on.

On the other hand, the apparatus of the McNichols *et al.* reference has only a single transferring device and a single driving means, as the Examiner noted. As a result, the apparatus of the McNichols *et al.* reference transfers pairs of side-by-side articles by receiving two articles from two different webs onto the single transferring device, *i.e.*, the combination roller 100, driven by the single driving means to which the Examiner referred, as shown in

Figure 18 and described throughout the reference. Every article or pair of side-by-side articles is received and applied by the same single transferring device and, therefore, there is no alternating sequence such as the A-B-A-B sequence, described above. Thus, the device of the McNichols *et al.* reference differs fundamentally from the device of the present invention in both structure and function.

Furthermore, these fundamental differences yield important advantages in the present invention, as described in the specification, including in the paragraph beginning on page 16 at line 9 and in the paragraph beginning on page 19 at line 1. For example, because each of the at least two independently driven transferring devices handle parts alternately, each cycle of each transferring device is at least two product cycles in length. Therefore, in an embodiment in which the parts are fed as a continuous web at a constant speed, each of the independently driven transferring devices can receive each part in the receiving zone while maintaining a constant surface speed substantially equal to the incoming speed of the web of parts and then, during the remainder of its cycle, that transferring device can change speed, apply that part in the application zone at a surface speed matched to that of the carrier onto which the part is being applied, and then return to the receiving speed.

In contrast, this matched speed receipt and application within each cycle is impossible to achieve with the apparatus of the McNichols *et al.* reference. As is explicitly disclosed in the McNichols *et al.* reference in the paragraph beginning in Column 14 at line 35, "[i]t is readily apparent to one of ordinary skill in the machine arts that matching V1 to the in-feed product for the ideal time span T0-T1 is a physical impossibility for a single variable velocity roll as described here...Since the component patch having length X is fed once per product of length Y, and the perfect time interval is T0-T6, it is only possible to match the in-feed speed (V1) for a fraction of the in-feed time, and therefore T0-T1 must be less than T0-T6" (underlining added for emphasis). In other words, in an apparatus like that of the McNichols *et al.* reference, the cycle of the single transferring device is a single product cycle in length and so that single transferring device cannot receive a part at matched speed, since doing so would take an entire cycle to accomplish, leaving none of the cycle available for changing speed, applying the part, and changing speed back to the receiving speed. The only way to receive parts at matched speed would be to set the receiving speed equal to the application speed and have one part being received while another is being applied. Doing so would make the apparatus of the McNichols *et al.* reference completely useless for its intended purpose of cutting workpieces from a web moving at a first speed and depositing them on a substrate web moving at a second speed, because it would convert the combination roller into merely a constant speed roller.

Lack of Suggestion or Motivation to Modify the Reference

Thus, the McNichols *et al.* reference explicitly acknowledges a limitation of its own apparatus. But then, rather than suggesting or providing motivation for the modification of its disclosed structure, such as by suggesting a structure in which two or more independently driven transferring devices receive and apply sequential parts or pairs of parts, the McNichols *et al.* reference teaches in the same paragraph that the inventors worked around the limitation by matching V1 during only a small fraction of the receiving function, specifically "during the instant of cutting".

Summary of Argument With Respect to First Rejection Under 35 USC 103

The prior art reference cited by the Examiner neither teaches nor suggests all the limitations of the pending claims, nor provides suggestion or motivation to modify the reference to make the invention of the pending claims. Therefore, applicants' agent respectfully submits that the Examiner has not met the requirements of MPEP § 2143 for the establishment of a *prima facie* case of obviousness with regard to the pending claims.

With regard to the Examiner's comment regarding language differentiating the functioning of the first and second independent driving means, applicants' agent respectfully avers that such functional language is not necessary to distinguish the claimed structure of the present invention from the structure disclosed in the McNichols *et al.* reference, because an apparatus comprising multiple independently driven transferring devices is clearly structurally distinct from an apparatus having a single transferring device, as the Examiner stated in the Office action.

Also, applicants' agent respectfully avers that the rejection of all the pending claims has been overcome in the above argument and, therefore, no response to the Examiner's comments regarding the application of an adhesive in Claims 12 and 21 is necessary.

Accordingly, applicants' agent respectfully requests that this rejection under 35 U.S.C. § 103 be reconsidered and withdrawn.

Second Rejection Under 35 USC 103

The Examiner rejected Claims 1 through 21 and 24 under 35 USC 103(a) as being unpatentable over the same Van Den Bergh reference cited in the above rejections under 35 USC 102, in view of either U.S. Patent 6,022,443 issued to Rajala *et al.* on 8 February 2000 or U.S. Patent 5,091,039 issued to Ujimoto *et al.* on 25 February 1992. The Examiner stated that the Van Den Bergh reference discloses the claimed invention except for the second rotatable transferring device of Claim 13. The Examiner then stated that "[i]t is well known in the art that parts may advantageously be transferred by pairs of rotatable transferring devices between conveyors moving at dissimilar speeds...as taught by Rajala *et al.* or Ujimoto *et al.*" The Examiner further stated that "[i]t should have been obvious to provide a second rotatable transferring device 14 and independent driving mechanism 16 adjacent to the single rotatable transferring device 14 in the device of Van Den Bergh in order to increase the through put of the device. When Van Den Bergh is modified in this fashion, it would show all the structure required by claims 1 through 10 and 13 through 19." The Examiner also stated that the application of an adhesive in Claims 12 and 21 "is deemed to have been an obvious design choice".

Applicants' agent respectfully traverses the rejection on the ground that the Examiner has not met the requirements of MPEP § 2143 for the establishment of a *prima facie* case of obviousness with regard to the pending claims.

Lack of Teaching or Suggestion of All the Claim Limitations

As described above with respect to the first rejection under 35 USC 103, the multiple independently driven transferring devices of the present invention alternate in receiving the parts in the receiving zone and applying the parts in the application zone and, thus, receive and apply sequential parts or pairs of parts in an alternating sequence. As is also described above, this alternating receipt and application of sequential parts is different from the receipt and application of pairs of sequential parts or pairs of side-by-side parts by a single transferring device. Thus, the provision of a second "paired" transferring device adjacent the device of Van Den Bergh would not yield the present invention, but merely a pair of the single transferring devices of Van Den Bergh, each receiving and applying sequential parts in non-alternating A-A-A-A and B-B-B-B sequences, respectively. Specifically, both of the paired transferring devices of such a modified device of Van Den Bergh would not receive parts traveling through a common receiving zone and apply the parts to a carrier traveling through a common application zone but, instead, each of the paired transferring devices would receive parts in its own receiving zone and apply them in its own application zone, *i.e.*, the paired transferring devices would receive parts in two receiving zones and apply them in two application zones.

It may be noted that the arrangement of the first drum 13 and second drum 14 of the Van Den Bergh reference in series is, likewise, not equivalent in structure to the apparatus of the present invention, as tacitly acknowledged by the Examiner in stating that the Van Den Bergh reference does not disclose the second rotatable transferring device of the present invention. Just as with the paired transferring devices described immediately above, each of the drums in series receives parts in its own receiving zone and applies or releases them in its own application or

release zone. Specifically, a series arrangement of transferring devices is not equivalent to an alternating arrangement.

In addition, the combination of the apparatus of the Van Den Bergh reference with the apparatus of either the Rajala *et al.* or the Ujimoto *et al.* reference would not yield the present invention. To progress from the apparatus of the Van Den Bergh reference to the apparatus of the present invention, one would have to both divide the single transferring device of the Van Den Bergh reference into two or more alternating transferring devices and drive each of the transferring devices independently. However, the Rajala *et al.* and Ujimoto *et al.* references disclose apparatus having multiple transferring devices but not independent driving mechanisms. Instead, each of the Rajala *et al.* and Ujimoto *et al.* references discloses an apparatus in which a single driving means drives a complex mechanism at a constant speed while the internal working of the rotating mechanism effectively advances and retards the several transferring devices with respect to each other.

Lack of Suggestion or Motivation to Modify the Reference or Combine Reference Teachings

As described above, the provision of a second "paired" transferring device adjacent the device of Van Den Bergh would not yield the present invention, but merely a pair of the single transferring devices of Van Den Bergh. Therefore, it would be necessary to incorporate multiple independently driven transferring devices receiving and applying parts in common receiving and application zones, in order to make the present invention. However, the references cited in this rejection not only provide neither suggestion nor motivation to combine the elements necessary to make the present invention, but actually teach away from doing so, in effect.

Van Den Bergh Reference

The Van Den Bergh reference is directed to a labeling machine in which, "[b]ecause of the acceleration in two steps and the small inertia of transport drums 13 and 14 which enable a fast acceleration, the speed of strip 20 may be relatively high." (Column 6, lines 60 through 62.) The two step acceleration is described in the paragraph beginning in Column 6 at line 53, where it is recited that, "label 4 is...first accelerated to an intermediate speed on first transport drum 13, is taken over by second transport drum 14 at this speed and subsequently is further accelerated to the speed of strip 24".

The construction of the drums and their driving mechanisms, as shown in Figure 3 of the Van Den Bergh reference, is specially designed to minimize their inertia. As described in the paragraph beginning in Column 4 at line 37 and the following two paragraphs:

> "Transport drums 13, 14 comprise a very thin wall with, for example, a thickness of 0.6 mm, of a very strong and light-weight material, in particular a composite material, synthetic material reinforced with fibers such as glass fibers or carbon fibers...
>
> The total weight of each transport drum is extremely small, for example, less than 50 gm, so that the inertia of each transport drum also is very small.

First transport drum 13, as represented in detail in FIG. 3, is open at one extremity and...motor 15 driving first transport drum 13...[is] situated therein."

In other words, a great deal of emphasis is placed on minimizing the inertia of the rotating transferring devices (drums) of the Van Den Bergh reference, to the extent that the motor driving each drum is encapsulated inside the drum, instead of driving the drum by means of a drive train or even through a shaft interconnecting the two. The quest for minimal inertia is carried so far that, as described in the paragraph beginning in Column 4 at line 56, a cooling mechanism is provided in order to avoid having the speed of the drum restricted by overheating of the encapsulated motor. Thus, the Van Den Bergh reference teaches that the minimization of inertia and the two step acceleration are both essential and sufficient, rather than suggesting the substitution of an alternative technology.

With regard to the general concept of providing "a second rotatable transferring device 14 and independent driving mechanism 16" to the apparatus of Van Den Bergh, it should be noted that, as stated above, the Rajala *et al.* and Ujimoto *et al.* references disclose apparatus having multiple transferring devices but not independent driving mechanisms. Therefore, one of ordinary skill in the art, when considering the Van Den Bergh reference together with the other two references, would see, on the one hand, a two step acceleration process including driving a single extremely low inertia drum without so much as a drive shaft to add inertia, taught to be essential and sufficient in Van Den Bergh, and a single step acceleration process including driving a complex mechanism with multiple transferring devices having a relatively massively higher inertia, on the other hand. Applicants' agent avers that the teaching of the Van Den Bergh reference clearly leads one to believe that the substitution of the latter for the former would be disadvantageous, rather than desirable.

Rajala *et al.* Reference

The Rajala *et al.* reference is directed to an apparatus driven at a constant speed by a single driving means and having one or more rotatable transferring mechanisms driven from the single driving means through non-circular gear trains in order to provide varying speeds for the receipt and application of parts. In embodiments of the Rajala *et al.* reference in which more than one rotatable transferring device is present, all of the transferring devices are driven by a single driving means 50 driving multiple driven means 60. As described in the paragraph beginning in Column 5 at line 60, "referring...to FIGS. 3A, 3B, 4 and 5...[t]he illustrated example of the apparatus 30 comprises three rotatable transferring means...for receiving and applying the parts...a driving system...having a driving means 50 which includes a rotatable noncircular drive gear 54 for transmitting rotational energy to the three driven means 60...[each of which] includes a rotatable noncircular driven gear 62...configured to rotate each of the transferring means". Thus, the transferring mechanisms are not independently driven, but instead are driven together by intermeshed gear trains.

The use of non-circular gears to achieve varying speeds is taught in the Rajala *et al.* reference to have several advantages. The objective of the invention is described in the Background section of the specification in the paragraph beginning in Column 2 at line 8, where it is stated that, "an inexpensive and adaptable method for

receiving discrete parts travelling at a speed and applying the parts to a web traveling at a different speed is desirable" (underlining added for emphasis). That these desired benefits are delivered by the invention of the Rajala *et al.* reference is stated in the paragraph beginning in Column 8 at line 45, where it is recited that, "[t]he use of a noncircular drive gear 54 and a noncircular driven gear 62 in the apparatus 30, as representatively illustrated in the various aspects of the invention described above, provides an inexpensive and adaptable method of receiving discrete parts 32 travelling at a speed and applying the parts to a substrate web 34 travelling at a different speed" (underlining added for emphasis). Also, in the paragraph beginning in Column 10 at line 32, it is recited that, "the use of noncircular gears provides the ability to obtain greater changes in speed and to maintain constant speeds for a fixed duration. The fixed speed dwell achieved by using noncircular gears can be accurately and inexpensively designed to precisely control the length and placement of the parts" (underlining added for emphasis).

Thus, the Rajala *et al.* reference teaches that the use of intermeshed noncircular gears to achieve speed profiles for multiple transferring devices is inexpensive, adaptable, and accurate, rather than suggesting the substitution of an alternative technology, such as the two step acceleration or the servo drive of the Van Den Bergh reference. Specifically, the Rajala *et al.* reference teaches an approach opposite that of independently driving the transferring devices.

Ujimoto *et al.* Reference

The Ujimoto *et al.* reference is directed to an apparatus driven at a constant speed by a single driving means and having multiple rotatable transferring mechanisms that are advanced and retarded with respect to each other by means of a drive wheel eccentrically located relative to their rotational center and slider crank mechanisms. As described in the paragraph beginning in Column 6 at line 67, "FIG. 3 shows...rotatable shaft 17 having an axis 0' offset to an axis 0 of the tubular shaft 15 extending through said tubular shaft 15. The rotatable shaft 17 is rotated at a constant speed...and a drive wheel 20 affixed to the other end of said rotatable shaft 17 is coupled to the...transfer means 11 for rotatably driving said transfer means." The description continues in the paragraph beginning in Column 8 at line 58 with, "[a]s seen in FIGS 4, 5 and 8, the drive wheel 20 includes four slidable engaging pins 48 projecting from and arranged at regular intervals on a side wall of the...transfer means 11. Correspondingly, each rotor element 26 is provided at a side wall with a U shaped guide piece 51 secured thereto...[t]he respective slidable engaging pins 48 may be thus slidably engaged with the respective guide pieces 51 to establish a rotatable slider crank mechanism." In the following paragraph, the description is completed with, "in reference with FIGS. 8 and 9...the respective rotor elements 26 are independently rotated at a variable speed, following a common rotational path, as the respective slidable engaging pins 48 of the drive wheel 20 are rotated at a constant speed."

Thus, like those in the Rajala *et al.* reference, the transferring mechanisms of the Ujimoto *et al.* reference are not independently driven, but instead are driven together by the pins on the drive wheel. The repeated use of the term "independently rotatable rotor elements" in the disclosure (for example, in Column 3 at line 11) and in the

Abstract could be misleading upon first reading of the reference, since the apparatus, when assembled and operated, forces all of the rotor elements to rotate with the drive wheel so that, even if each rotor element is nominally "independently rotatable", it is not independently rotated and is certainly not independently driven.

The Ujimoto *et al.* reference teaches that its mechanism has several advantages. The objective of the invention is described in the Background section of the specification in the paragraph beginning in Column 2 at line 40, where it is stated that, "a primary object of the present invention is to provide a technique for intermittently bonding elastic band onto a web at...high speed, reliability and efficiency through a continuous operation" (underlining added for emphasis). That these desired benefits are delivered by the invention of the Ujimoto *et al.* reference is stated in the paragraph beginning in Column 5 at line 54, where it is recited that, "[a]ccording to the important features of the present invention, severance, spacing adjustment and lateral displacement of the elastic band can be accomplished during its continuous movement along the circumferential path and applying of the elastic band can be performed by continuous operation, so the present invention can achieve not only speed-up and stabilization of the mechanism operation but also improvement of work efficiency" (underlining added for emphasis).

Thus, the Ujimoto *et al.* reference teaches that the use of eccentrically driven transferring devices (rotor elements) to achieve speed profiles is inexpensive, adaptable, and accurate, rather than suggesting the substitution of an alternative technology, such as the two step acceleration or the servo drive of the Van Den Bergh reference. In fact, the emphasis on continuous motion in the Ujimoto *et al.* reference is directly contradictory to the intermittent operation disclosed in the Van Den Bergh reference, including in the paragraph beginning in Column 2 at line 49. Specifically, the Ujimoto *et al.* reference teaches an approach opposite that of independently driving the transferring devices.

Summary of Argument With Respect to Second Rejection Under 35 USC 103

The prior art references cited by the Examiner, whether taken singly or in combination, neither teach nor suggest all the limitations of the pending claims, nor do the references provide suggestion or motivation to make the invention of the pending claims. Furthermore, applicants' agent avers that it is only with the benefit of impermissible hindsight, in light of the applicants' disclosure that alternating transferring mechanisms can advantageously be independently driven, that one would conceive of a combination like that suggested by the Examiner. Therefore, applicants' agent respectfully submits that the Examiner has not met the requirements of MPEP § 2143 for the establishment of a *prima facie* case of obviousness with regard to the pending claims.

Also, applicants' agent respectfully avers that the rejection of all the pending claims has been overcome in the above argument and, therefore, no response to the Examiner's comments regarding the application of an adhesive in Claims 12 and 21 is necessary.

Accordingly, applicants' agent respectfully requests that this rejection under 35 U.S.C. § 103 be reconsidered and withdrawn.

SUMMARY OF THIS RESPONSE

1. A paragraph on page 2 in the specification has been amended to correct the number of a U.S. Patent cited there.
2. A paragraph on page 14 in the specification has been amended to correct a typographical error.
3. A paragraph on page 18 in the specification has been amended to add an inadvertently omitted reference numeral. A typographical error in the same paragraph has also been corrected.
4. Claims 1 through 12 have been cancelled.
5. Claim 24 has been amended to incorporate limitations previously recited in Claim 13 relative to more than one transferring device and driving mechanism. This claim has also been amended to correct a typographical error by deleting extraneous text.
6. Drawing objections have been addressed.
7. The rejections of claims under 35 U.S.C. § 102 have been argued.
8. The rejections of claims under 35 U.S.C. § 103 have been traversed and argued.

No new matter has been added by this response.

In light of the above amendments and remarks, applicant requests that the Examiner reconsider and withdraw the objections and rejections and allow the pending claims. Issuance of a Notice of Allowance at an early date is respectfully requested.

Respectfully submitted,

FOR: JEFFREY HALE BLUMENTHAL ET AL.

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10 January 2002
Customer No. 27752

REPLACEMENT PARAGRAPHS MARKED UP TO SHOW CHANGES

SUBMITTED IN ACCORDANCE WITH 37 CFR 1.121(b)(1)(iii)

IN RESPONSE TO OFFICE ACTION OF 11 OCTOBER 2001

IN THE SPECIFICATION

Marked up version of replacement paragraph beginning on page 2 at line 14 of the application as filed:

Another method has used festoons to reduce the speed of the carrier web to match the speed of the discrete parts of material to be applied to the web. An example of this method is described in U.S. Patent No. [5,693,195] 5,693,165 issued to Schmitz. The carrier web is temporarily slowed down to the speed of the parts with the excess portion of the carrier web gathering in festoons. The parts of material are then applied to the carrier web while both the parts and the web are traveling at the same speed. The festoons are then released allowing the moving web to return to its original speed. This method has two main drawbacks. First, the carrier web must be festooned and then released; this may damage or otherwise change the properties of the carrier web. Second, the storage system requires a large amount of space in typical disposables production systems because there is a direct relationship between line speed and storage space needed.

Marked up version of replacement paragraph beginning on page 14 at line 13 of the application as filed:

Now, given the inputs, one of ordinary skill can determine τ_{TRANS}, ω_{min}, ω_{max}, θ_{min}, θ_{max}, and $\theta_{transition}$ which are typical inputs needed for electric cam software programs. The generic cam programs would then create the input table for the motor 64. Note that the Radius is an optimal radius, and not the only possible radius for the set of inputs. The Radius is optimal because it uses the entire transition time for changing the angular velocity of the transferring device 50. By changing the Radius, the actual amount of time required to change speed must change or else the combined conditions of change in angular velocity and change in angular acceleration will not be met. The amount by which the Radius [can deviate from the optimum] can be changed from optimal depends upon the torque requirements of the system under the new accelerations at the given speed and the capability of the selected motor 64.

Marked up version of replacement paragraph beginning on page 18 at line 16 of the application as filed:

There is no restriction on the number of shell segments per motor besides space and inertial concerns, however, the arrangement pattern of multiple devices is limited. For instance, a transferring device having two shell segments per motor cannot be arranged such that any two shell segments on one transferring device are adjacent to one another in sequence without at least one shell segment from a separate transferring device driven by a separate motor interposed between them. Figures 9a and 9b portray an apparatus according to the present invention including an applicator 300 for performing a secondary process on the parts and two transferring [devise] devices 150 and 250, each having multiple shell segments. Transferring device 150 comprises three shells 151A, 151B, and 151C and transferring device 250 comprises three shells 251A, 251B, and 251C. Each transferring device is driven by a separate motor 164, 264. As shell segment 151A of transferring device 150 collects a part in the receiving zone 21, the surface speed of shell segments 151A, 151B and 151C are each equal

to the receiving speed while the surface speeds of shell segments 251A, 251B, and 251C of transferring device 250 are each equal to either the application speed or some other transitional speed.

AMENDED CLAIM MARKED UP TO SHOW CHANGES
SUBMITTED IN ACCORDANCE WITH 37 CFR 1.121(c)(1)(ii)
IN RESPONSE TO OFFICE ACTION OF 11 OCTOBER 2001

24. (Amended) A method for receiving parts traveling at a first speed and applying the parts to a carrier traveling at a second speed [the method] comprising the steps of:

providing at least [one] two rotatable transferring [device] devices;

providing at least [one] two independent driving [mechanism] mechanisms [coupled to the] for rotating the transferring [device] devices, the independent driving [mechanism] mechanisms including [a] programmable [motor] motors coupled to the transferring [device] devices;

programming the programmable [motor] motors to rotate the transferring [device] devices through a receiving zone at [a] first surface [speed] speeds to [collect] receive the parts and to rotate the transferring [device] devices through an application zone at [a] second surface [speed] speeds to [transfer] apply the parts to [a] the carrier.